AUTHOR INDEX, VOLUME 43

Section	March	June	Sept.	Dec.
ACKNOWLEDGEMENTS	—	—	—	1041
THE BIOMETRIC SOCIETY	—	—	—	1037
BOOK REVIEWS	251	477	729	1025
CORRECTIONS	259	—	737	1035
CORRESPONDENCE	249	—	727	1023

ABAKUKS, A. Book Review 484
ABEYWICKRAMA, K. (see HAKULINEN, T.) 313
AINSLEY, A. E., PATERSON, L. J., and PATTERSON, H. D. A method for predicting the efficiency of incomplete-block trials 55
ARMITAGE, P. Book Reviews 251, 1028

BADGER, G. J., VACEK, P. M., and REICHMAN, R. C. A Markov model for a clinical episode of recurrent genital herpes 399
BAILEY, B. J. R. Confidence limits to the risk ratio 201
BARRY, D. (see HARTIGAN, J. A.) 261
BEAL, S. L. Asymptotic confidence intervals for the difference between two binomial parameters for use with small samples 941
BEDRICK, E. J. A family of confidence intervals for the ratio of two binomial proportions 993
BEGG, C. B. (see KALISH, L. A.) 145
BENTLER, P. M. (see BONETT, D. G.) 985
BERGER, J. Book Review 732
BERK, K. Computing for incomplete repeated measures 385
BERRY, D. A. Logarithmic transformations in ANOVA 439
BERRY, J. J. (see EDWARDS, D.) 913
BOLOGNESE, J. A. (see CIMINERA, J. L.) 713
BONETT, D. G., WOODWARD, J. A., and BENTLER, P. M. Estimating the size of closed populations using inverse multiple-recapture sampling 985
BONNEY, G. E. Logistic regression for dependent binary observations 951
BROOKMEYER, R. and DAY, N. E. Two-stage models for the analysis of cancer screening data 657
BROOKMEYER, R. and GAIL, M. H. Biases in prevalent cohorts 739
BROSS, I. D. Response to Reader Reaction: Proof of safety vs proof of hazard 724
BROWNIE, C. Reader Reaction: Recent models for mark–recapture and mark–resighting data 1017
BUCKLAND, S. T. On the variable circular plot method of estimating animal density 363
BURDICK, R. K. (see LU, T.-F. C.) 535

CAMPBELL, M. J. Book Review 730
CANTOR, A. B. (see GROSS, A. J.) 875
CARRIQUIRY, A. L., GIANOLA, D., and FERNANDO, R. L. Mixed-model analysis of a censored normal distribution with reference to animal breeding 929
CARTER, R. L. (see VONESH, E. F.) 617
CATCHPOLE, E. A., MORGAN, B. J. T., and O'DOWD, D. J. Modelling ant–insect interactions on flowerheads of *Helichrysum Bracteatum* 767
CHA, S. S. (see CHANG, M. N.) 865
CHANG, M. N., THERNEAU, T. M., WIEAND, H. S., and CHA, S. S. Designs for group sequential Phase II clinical trials 865
CHAO, A. Estimating the population size for capture–recapture data with unequal catchability 783
CHEN, J. J. and KODELL, R. L. Analyses of two-way chronic studies 499
CHIKUNI, S. (see KIMURA, D. K.) 23
CIAMPI, A. (see ETEZADI-AMOLI, J.) 181
CIMINERA, J. L., BOLOGNESE, J. A., and GREGG, M. H. The statistical evaluation of a three-period two-treatment crossover pharmacokinetic drug interaction study 713
CLARK, B. C. (see GROSS, A. J.) 875
CLARK, G. M. Book Review 734
CLAYTON, D. and KALDOR, J. Empirical Bayes estimates of age-standardized relative risks for use in disease mapping 671
CLOBERT, J. and LEBRETON, J.-D. Response to Reader Reaction: Recent models for mark–recapture and mark–resighting data 1019
COHEN, G. R. Book Reviews 732
CONNOR, R. J. Sample size for testing differences in proportions for the paired-sample design 207
CONYERS, R. A. J. (see JAMES, A. T.) 246
COOK, D. G. Book Review 255
COPAS, J. B. Book Review 729
COPENHAVER, M. D. (see HOLLAND, B. S.) 417
CORMACK, R. M. Book Review 730
COX, C. Threshold dose–response models in toxicology 511
CRAGER, M. R. Analysis of covariance in parallel-group clinical trials with pretreatment baselines 895
CULLIS, B. R. (see GLEESON, A. C.) 277

DAY, N. E. (see BROOKMEYER, R.) 657
DEMETS, D. L. (see KIM, K.) 857
DEMPSTER, A. P. (see MENG, C. Y. K.) 301
DEMPSTER, E. R. (see LOUIS, E. J.) 805
DIAMOND, I. D. Book Review 483
DIETZ, E. Book Review 480
DINSE, G. E. (see PORTIER, C. J.) 107
DONNER, A. and HAUCK, W. W. Correspondence 250

DRUMMER, T. D. and McDONALD, L. L. Size bias in line transect sampling 13
DUFFY, D. E. and SANTNER, T. J. Confidence intervals for a binomial parameter based on multistage tests 81

EDWARDS, A. W. F. Book Review 254
EDWARDS, D. and BERRY, J. J. The efficiency of simulation-based multiple comparisons 913
ELSTON, D. A. (see GLASBEY, C. A.) 245
ENGBRING, J. (see RAMSEY, F. L.) 1
ESPELAND, M. A. and HUI, S. L. A general approach to analyzing epidemiologic data that contain misclassification errors 1001
ETEZADI-AMOLI, J. and CIAMPI, A. Extended hazard regression for censored survival data with covariates: A spline approximation for the baseline hazard function 181

FADDY, M. J. Book Review 1028
FERNANDO, R. L. (see CARRIQUIRY, A. L.) 929
FISHER, N. I. Book Review 477
FLEHINGER, B. J. and KIMMEL, M. The natural history of lung cancer in a periodically screened population 127
FLEMING, T. R. (see O'BRIEN, P. C.) 169
FLÜHLER, H. Book Reviews 1029, 1030
FLÜHLER, H. (see RACINE-POON, A.) 847
FREEMAN, G. H. Book Review 1026
FUCHS, C. and SAMPSON, A. R. Simultaneous confidence intervals for the general linear model 457

GADE, E. T. (see SANATHANAN, L. P.) 825
GAIL, M. H. (see BROOKMEYER, R.) 739
GARRISON, C. Z. (see JANNARONE, R. J.) 433
GART, J. J. and TARONE, R. E. Reader Reaction: On the efficiency of age-adjusted tests in animal carcinogenicity experiments 235
GELLER, N. L. (see POCOCK, S. J.) 487
GELLER, N. L. and POCOCK, S. J. Interim analyses in randomized clinical trials: Ramifications and guidelines for practitioners 213
GEURTS, J. H. J. On the small-sample performance of Efron's and of Gill's version of the product limit estimator under nonproportional hazards 683
GIANOLA, D. (see CARRIQUIRY, A. L.) 929
GILBERT, P. R. (see HALPERIN, M.) 71
GIRARD, D. M. and SAGER, D. B. The use of Markov chains to detect subtle variation in reproductive cycling 225
GLADEN, B. Correspondence 1024
GLASBEY, C. A. and ELSTON, D. A. Reader Reaction: An example of fitting a differential equation to data 245
GLEESON, A. C. and CULLIS, B. R. Residual maximum likelihood (REML) estimation of a neighbour model for field experiments 277
GOFFINET, B. (see WALLACH, D.) 561
GOWER, J. C. Book Review 478
GRAUBARD, B. I. and KORN, E. L. Choice of column scores for testing independence in ordered $2 \times K$ contingency tables 471
GRAYBILL, F. A. (see LU, T.-F. C.) 535
GRAYSON, D. A. Statistical diagnosis and the influence of diagnostic error 975
GREGG, M. H. (see CIMINERA, J. L.) 713
GREGSON, K. Book Review 256
GRIEVE, A. P. (see RACINE-POON, A.) 847
GROSS, A. J., HUNT, H. H., CANTOR, A. B., and CLARK, B. C. Sample size determination in clinical trials with an emphasis on exponentially distributed responses 875

HAKULINEN, T., TENKANEN, L., and ABEYWICKRAMA, K. Testing equality of relative survival patterns based on aggregated data 313
HALPERIN, M., GILBERT, P. R., and LACHIN, J. M. Distribution-free confidence intervals for $\Pr(X_1 < X_2)$ 71
HARTIGAN, J. A. and BARRY, D. Asynchronous distance between homologous DNA sequences 261
HAUCK, W. W. (see DONNER, A.) 250
HELLAND, I. S. On the interpretation and use of R^2 in regression analysis 61
HERZBERG, A. M. (see LINDSEY, J. C.) 327
HOLFORD, T. R. (see WICKRAMARATNE, P. J.) 751
HOLGATE, P. Book Review 731
HOLLAND, B. S. and COPENHAVER, M. D. An improved sequentially rejective Bonferroni test procedure 417
Correction 737
HOLLAND, P. W. (see PHILLIPS, A.) 425
HÜHN, M. (see NASSAR, R.) 45
HUI, S. L. (see ESPELAND, M. A.) 1001
HUNT, H. H. (see GROSS, A. J.) 875

JAMES, A. T. and CONYERS, R. A. J. Response to Reader Reaction: An example of fitting a differential equation to data 246
JAMES, W. H. Correspondence 1023
JANNARONE, R. J., MACERA, C. A., and GARRISON, C. Z. Evaluating interrater agreement through "case–control" sampling 433
JINN, J. H., SEDRANSK, J., and SMITH, P. Optimal two-phase stratified sampling for estimation of the age composition of a fish population 343
JOHN, J. A. Book Review 1025
JOHNSON, R. A., VERRILL, S., and MOORE, D. H., II. Two-sample rank tests for detecting changes that occur in a small proportion of the treated population 641

KALDOR, J. (see CLAYTON, D.) 671
KALISH, L. A. and BEGG, C. B. Evaluation of efficient designs for observational epidemiologic studies 145
KEMP, A. W. Families of discrete distributions satisfying Taylor's power law 693
Book Reviews 252, 479, 485, 1027
KEMP, A. W. (see KEMP, C. D.) 257, 258, 485, 486, 734, 735, 1031–1033
KEMP, C. D. and KEMP, A. W. Book Reviews 257, 258, 485, 486, 734, 735, 1031–1033

KHURI, A. I. and LITTELL, R. C. Exact tests for the main effects variance components in an unbalanced random two-way model 545
KIM, K. and DEMETS, D. L. Confidence intervals following group sequential tests in clinical trials 857
KIMBALL, A. W. A test for a threshold in an ordered sequence of correlated proportions 707
KIMMEL, M. (see FLEHINGER, B. J.) 127
KIMURA, D. K. and CHIKUNI, S. Mixtures of empirical distributions: An iterative application of the age–length key 23
KIRBY, A. C. (see O'NEILL, M. E.) 37
KODELL, R. L. (see CHEN, J. J.) 499
KOKOSKA, S. M. The analysis of cancer chemoprevention experiments 525
KORN, E. L. (see GRAUBARD, B. I.) 471
KRZANOWSKI, W. J. Cross-validation in principal component analysis 575
KUNERT, J. On variance estimation in crossover designs 833

LACHENBRUCH, P. A. Book Review 1026
LACHIN, J. M. (see HALPERIN, M.) 71
LEBRETON, J.-D. (see CLOBERT, J.) 1019
LIANG, K.-Y. Extended Mantel–Haenszel estimating procedure for multivariate logistic regression models 289
LIAO, J. Correspondence 727
LINDSEY, J. C., HERZBERG, A. M., and WATTS, D. G. A method for cluster analysis based on projections and quantile–quantile plots 327
LITTELL, R. C. (see KHURI, A. I.) 545
LOUIS, E. J. and DEMPSTER, E. R. An exact test for Hardy–Weinberg and multiple alleles 805
LU, T.-F. C., GRAYBILL, F. A., and BURDICK, R. K. Confidence intervals on the ratio of expected mean squares $(\theta_1 + d\theta_2)/\theta_3$ 535

MACERA, C. A. (see JANNARONE, R. J.) 433
MANTEL, N. Correspondence 249
MATTS, J. and McHUGH, R. Randomization and efficiency in Zelen's single-consent design 885
McDONALD, L. L. (see DRUMMER, T. D.) 13
McHUGH, R. (see MATTS, J.) 885
MEAGHER, T. R. (see THOMPSON, E. A.) 585
MENG, C. Y. K. and DEMPSTER, A. P. A Bayesian approach to the multiplicity problem for significance testing with binomial data 301
MIHALKO, D. Repeated significance testing in survival analysis using a litter-matched design 115
MILLARD, S. P. Reader Reaction: Proof of safety vs proof of hazard 719
MOORE, D. H. II (see JOHNSON, R. A.) 641
MORAN, M. A. Book Review 478
MORGAN, B. J. T. (see CATCHPOLE, E. A.) 767
MORGAN, T. M. Nonparametric estimation of duration of accrual and total study length for clinical trials 903
MUÑOZ, A. and ROSNER, B. Correspondence 727

NAM, J. A simple approximation for calculating sample sizes for detecting linear trend in proportions 701
NASSAR, R. and HÜHN, M. Studies on estimation of phenotypic stability: Tests of significance for nonparametric measures of phenotypic stability 45
NELDER, J. A. Book Review 253
NICHOLAS, F. W. (see O'NEILL, M. E.) 37
NORTH, P. M. Book Review 733

O'BRIEN, P. C. and FLEMING, T. R. A paired Prentice–Wilcoxon test for censored paired data 169
O'DOWD, D. J. (see CATCHPOLE, E. A.) 767
O'NEILL, M. E., PRASETYO, L. H., KIRBY, A. C., and NICHOLAS, F. W. A comparison of parent–offspring correlation estimators in terms of large-sample mean squared error and bias 37
OSBORN, J. F. Book Review 256

PATERSON, L. J. (see AINSLEY, A. E.) 55
PATTERSON, H. D. (see AINSLEY, A. E.) 55
PERRY, J. N. Book Review 252
PHILLIPS, A. and HOLLAND, P. W. Estimators of the variance of the Mantel–Haenszel log-odds-ratio estimate 425
POCOCK, S. J. (see GELLER, N. L.) 213
POCOCK, S. J., GELLER, N. L., and TSIATIS, A. A. The analysis of multiple endpoints in clinical trials 487
PORTIER, C. J. and DINSE, G. E. Semiparametric analysis of tumor incidence rates in survival/sacrifice experiments 107
PRASETYO, L. H. (see O'NEILL, M. E.) 37

RAAIJMAKERS, J. G. W. Statistical analysis of the Michaelis–Menten equation 793
RACINE-POON, A., GRIEVE, A. P., FLÜHLER, H., and SMITH, A. F. M. A two-stage procedure for bioequivalence studies 847
RAI, K. Response to Reader Reaction: Dose–response models for teratological experiments 1016
RAI, K. (see VAN RYZIN, J.) 95
RAMSEY, F. L. (see THOMPSON, S. K.) 355
RAMSEY, F. L., WILDMAN, V., and ENGBRING, J. Covariate adjustments to effective area in variable-area wildlife surveys 1
REICHMAN, R. C. (see BADGER, G. J.) 399
RENSHAW, E. Book Review 480
ROSNER, B. (see MUÑOZ, A.) 727
RUTHERFORD, A. A. Book Review 1030
RYAN, L. M. Response to Reader Reaction: On the efficiency of age-adjusted tests in animal carcinogenicity experiments 243

SAGER, D. B. (see GIRARD, D. M.) 225
SAMPSON, A. R. (see FUCHS, C.) 457
SANATHANAN, L. P., GADE, E. T., and SHIPKOWITZ, N. L. Trimmed logit method for estimating the ED50 in quantal bioassay 825
SANTNER, T. J. (see DUFFY, D. E.) 81
SEDRANSK, J. (see JINN, J. H.) 343

SHIPKOWITZ, N. L. (see SANATHANAN, L. P.) 825
SMITH, A. F. M. (see RACINE-POON, A.) 847
SMITH, C. A. B. Book Review 255
SMITH, G. L. Book Review 483
SMITH, P. (see JINN, J. H.) 343
SMITH, P. J. Maximum likelihood estimation of the distribution of length at age 601
STENE, J. Book Review 482
STEWART, P. W. Line-segment confidence bands for repeated measures 629
STREIT, F. Testing for effective intervention 999
SUTHERLAND, R. A. Book Review 481

TAMURA, R. N. and YOUNG, S. S. A stabilized moment estimator for the beta–binomial distribution 813
TARONE, R. E. (see GART, J. J.) 235
TAYLOR, J. M. G. Kendall's and Spearman's correlation coefficients in the presence of a blocking variable 409
TENKANEN, L. (see HAKULINEN, T.) 313
THERNEAU, T. M. (see CHANG, M. N.) 865
THOMPSON, E. A. and MEAGHER, T. R. Parental and sib likelihoods in genealogy reconstruction 585
THOMPSON, S. K. and RAMSEY, F. L. Detectability functions in observing spatial point processes 355
TSIATIS, A. A. (see POCOCK, S. J.) 487
TSIATIS, A. A. (see WANG, S. K.) 193

VACEK, P. M. (see BADGER, G. J.) 399
VAN RYZIN, J. and RAI, K. A dose–response model incorporating nonlinear kinetics 95
VERRILL, S. (see JOHNSON, R. A.) 641
VONESH, E. F. and CARTER, R. L. Efficient inference for random-coefficient growth curve models with unbalanced data 617

WALLACH, D. and GOFFINET, B. Mean squared error of prediction in models for studying ecological and agronomic systems 561
WANG, S. K. and TSIATIS, A. A. Approximately optimal one-parameter boundaries for group sequential trials 193
WATTS, D. G. (see LINDSEY, J. C.) 327
WEINBERG, C. Correspondence 1024
WICKRAMARATNE, P. J. and HOLFORD, T. R. Confounding in epidemiologic studies: The adequacy of the control group as a measure of confounding 751
WIEAND, H. S. (see CHANG, M. N.) 865
WILDMAN, V. (see RAMSEY, F. L.) 1
WILLIAMS, D. A. Reader Reaction: Dose–response models for teratological experiments 1013
WOODWARD, J. A. (see BONETT, D. G.) 985
WRIGHT, H. L. Book Review 253

YOUNG, S. S. (see TAMURA, R. N.) 813

SUBJECT INDEX, VOLUME 43

AIDS 739
Accelerated failure time 181
Additivity 499
Adès 693
Aerial surveys 355
Age–length key 23
Agronomy 561
Analysis of covariance 895
Analysis of variance 439
Andrews's plots 327
Ant-guard hypothesis 767
Ant–insect interactions 767
Approximate distribution 617
Asymptotic power 701
  relative efficiency 145, 235
Asymptotically efficient 617
Asymptotics 289
Asynchronous distance 261
Average sample number 193

Bayesian approach 585
  inference 301
  methods 847
  optimization 343
Binary data 951, 1013
Binomial parameters 941
  success probability 81
Bioassay 235
Bioequivalence assessment 847
Bivariate normal 895
  t distributions 629
Bonferroni intervals 457
Bootstrap 561
Brownian motion process 857

Cancer 313, 657
  atlas 671
Capture–recapture 783
Carcinogenesis bioassay 107
Carcinogenicity data 95
  experiments 235
Carryover effects of treatments 833
Case–control study 145, 289, 657
Cause of death 107
Censored data 169, 235, 683
  survival data 181
Censoring 525, 929
Chi-square test 433
Chromosomes 641
Chronic animal experiment 301
Circular transects 355
Clinical trials 81, 193, 865, 875, 895, 903
  analysis 487
  design 213
Cluster analysis 327
Clustered population 13
Coefficient of determination 61
Cohort study 201, 739
Collapsibility 751
Combined effect 499
Combining 2 × 2 tables 425
Competing risks 107, 313
Computerized tomography 61
Conditional independence 409
  likelihood 657
Confidence interval 61, 71, 201, 535, 941
Confounding 525, 751
Constant rate 261
Continuity correction 201
Correlated errors 833
  proportions 707
Crossover design 713, 833, 847

DNA sequence 261
Dependent data 289
  observations 951
Detectability functions 355
Detection 127
Diagnostic error 975
Direct effect of treatments 833
Dirichlet prior distribution 343
Discrete data 1001
Discriminant analysis 585
Distribution mixtures 23
Distribution-free confidence interval 71
Dose–response curves 629
  model 95, 1013

ED50 estimation 825
Ecology 561
Effective area 1
Efficiency 55, 289, 885
Empirical Bayes 813
  estimate 671
Ensemble estimator 37
Environmental monitoring 719
Enzyme kinetics 793
Epidemiologic studies 751
Error rates 1001
Estimated generalized least squares 617
Estimating functions 289
Estimation of animal abundance 355
Estrous cycle 225
Exact conditional permutation test 471
Exact test 805
Expectation–maximization algorithm 23, 301
Expected trial cost 875
Extended hazards regression 181
Extrabinomial variation 1013

Field experiment 277
Finite horizon 81
Finite-interval confidence band 629
Fisheries science 23
Follow-up study 145
Fourier series model 363

GLIM 313
Gauss–Markov process 115
Gaussian spatial process 671
Genealogy estimation 585
General linear models 1, 313, 929
Generalized Type I error probability 417
Genetic marker data 585
Genotype–environment interaction 45
Goodness of fit 767
Graphical methods 601
Group sequential methods 213
  test 865
  trials 193
Grouped sequential hypothesis test 81
Growth curves 385, 629

Half-normal model 363
Hardy–Weinberg 805
Hazard-rate model 363
Hemodialysis 617
Hermite polynomial model 363
Heterogeneity 783
Historical controls 813
Hypothesis testing 545, 719

Incomplete data 601, 617, 1001
Influential observations 575
Interaction 499
Interclass correlation 37
  regression 37
Intermethod agreement 433
Intervened Poisson distribution 999
Inverse sampling 985
Irreversible disease 107

Jackknife standard errors 575
James–Stein estimate 671

Kaplan–Meier estimator 903
Kappa statistic 433
Kendall's tau 409
Kinetic transformation 95
Kurtosis 439

Least squares 439
Lethal tumors 235
Lethality 107
Lexis ratio 1013
Likelihood 439
  factorization 601
  ratio test 525
Line transect 13, 355
  sampling 363
  surveys 1
Linear rank statistic 115
  trend test 701

Litter-matched design 115
Log-likelihood distributions 585
Log-linear models 951, 1001
Log-normal distribution 439
Log-rank 499
  test 235
Logarithmic transform 439
Logistic regression 289, 951, 1013
Logit model 825
Longitudinal studies 629
Low-dose extrapolation 95
Lung cancer 127

Mahalanobis distance 601
Main effects 499
Mantel–Haenszel estimator 289
Markov chain 225, 399
Matched design 145
  pairs 425
Maximum likelihood, 385, 525
  estimation 95, 181, 511, 601, 793
McNemar test 207, 707
Mean squared error of prediction 561
Michaelis–Menten equation 793
Midrank scores 471
Missing data 385
Mixed models 929
Mixtures 641
Model evaluation 561
Modelling 561
Mortality 127
  rate 107
Multidimensional tables 951
Multiple alleles 805
  comparisons 417, 913
  correlation coefficient 61
  endpoints 487
  regression analysis 61
Multiple-recapture sampling 985
Multiplicity 487
  of tests 301
Multivariate Bernoulli distribution 707
  binary data 951
  t distribution 457

Negative binomial 693, 985
Neighbour analysis 277
Newton–Raphson procedure 301
Neyman type A 693
Noncentral hypergeometric distribution 425
Nonparametric measures 45
Nonproportional hazards 683
Normal logistic model 301

Observed level of significance 417
Occult disease 107
(1, *M*)-matching 425
Optimal boundaries 193
  design 145, 739
  length of trial 875
  sample sizes 343
Ordered categorical data 471

P-value 417
Paired data 169
  t test 169
Pairwise estimator 37
Parsimonious fit 693
Pharmacokinetic drug interaction study 713
Phenotypic stability 45
Plot sampling 355
Poisson with zeroes 693
Polya–Aeppli 693
Population size 783
Positive lower orthant dependence 457
  orthant dependence 417
Postblocking 55
Power 719
  divergence statistic 993
  of exact tests 545
  function 865
Precision 885
Pretreament baselines 895
Prevalence 739
Principal component model choice 575
Probability-ratio test 865
Product limit estimator 683
Projections 327
Proportion equality test 433
Proportional hazards 181, 313, 739
  model 903

Quantal bioassay 825
  response 95, 511
Quantile–quantile plots 327

Random covariate 895
  effects 929
  model 535
  sample design 145
Random-coefficient growth model 617
Randomization analysis 885
  distribution 55
Randomized blocks 55
Rank correlation 409
  tests 641
  transformations 439
Receptor binding 793
Regressive models 951
Relative risk 671
  survival rate 313
Repeated measures 617
  significance testing 115, 213
Reproductive biology 225
Residual maximum likelihood estimation 277
Resolvable incomplete blocks 55
Restricted maximum likelihood 385
Reversibility 261
Risk ratio 201, 993
Robust methods 439
Rodent bioassay 813

Sample size 207, 701, 875, 903
Scale parameters 1
Scheffé procedure 457
Screening 127, 657
Selection of variables 575
Sensitivity 975
Sequential estimation 81
Serial dependence 951
Sib–mean estimator 37
Sign test 169
Signed rank test 169
Simulation 767, 913
Simultaneous confidence intervals 457
  estimation 913
  tests of hypothesis 417
Single-consent design 885
Singular value decomposition 575
Size-biased sampling 13
Skewness 439
Skin tumors 525
Small-sample moments 683
Spatial pattern 355
Spearman's rho 409
Specificity 975
Splines 181
Stability of visual acuity 707
  parameter 45
Standardized mortality ratio 671
Statistical diagnosis 975
Stochastic ordering 857
  process 399
Stratification 499
Survival analysis 903
  function 683

Taylor's power law 693
Teratology experiments 1013
Tests for intervention parameter 999
  of significance 45
Three-period two-treatment design 713
Threshold model 511
  testing 707
Time homogeneity 399
Trimming 825
Tukey-lambda distribution 511
Tumor incidence 301
Two-sample problem 71, 941
Two-stage models 657
  procedures 847
Two-way chronic studies 499
  crossed classification with interaction model 545
Type I error 719
  spending rate function 857
Type II error 719

Unbalanced random model 545
Uncorrelated errors 833

Variable circular plot surveys 1, 363
Variance components 535, 545, 561, 929

Weibull model 107
Weighted distributions 13
Wilcoxon rank-sum test 471
  statistic 71
  test 169
Wildlife surveys 1

Zelen's clinical trial 885

INDEX OF BOOKS REVIEWED, VOLUME 43

ANDĚL, J. **Statistische Analyse von Zeitereihen** (Editors) 735

ATKINSON, A. C. **Plots, Transformations, and Regression: An Introduction to Graphical Methods of Diagnostic Regression Analysis** (N. I. Fisher) 477

BACON, P. J. (ed.). **Population Dynamics of Rabies in Wildlife** (J. Berger) 732

BERNARDO, J. M., DEGROOT, M. H., LINDLEY, D. V., and SMITH, A. F. M. (eds). **Bayesian Statistics 2** (Editors) 257

BIBBY, J. **Notes Towards a History of Teaching Statistics** (Editors) 1031

BIBBY, J. **Quotes, Damned Quotes, and . . . , 2nd edition** (Editors) 735

BROWN, L. D., OLKIN, I., SACKS, J., and WYNN, H. P. (eds). **Jack Carl Kiefer: Collected Papers, Vols. I, II, III** (Editors) 257

BULMER, M. G. **The Mathematical Theory of Quantitative Genetics** (Editors) 258

BUNKE, H. and BUNKE, O. (eds). **Statistical Inference in Linear Models, Vol. 1** (M. A. Moran) 478

CITRO, C. F. and COHEN, M. L. **The Bicentennial Census: New Directions for Methodology in 1990** (Editors) 486

DEICHSEL, G. and TRAMPISCH, H. J. **Clusteranalyse und Diskriminanzanalyse** (E. Dietz) 480

DIGBY, P. G. N. and KEMPTON, R. A. **Multivariate Analysis of Ecological Communities** (R. M. Cormack) 730

DUDEWICZ, E. J. (ed.). **The Frontiers of Modern Statistical Inference Procedures** (Editors) 258

ETHIER, S. N. and KURTZ, T. G. **Markov Processes: Characterization and Convergence** (A. Abakuks) 484

FEINSTEIN, A. R. **Clinical Epidemiology: The Architecture of Clinical Research** (D. G. Cook) 255

FLEISS, J. L. **The Design and Analysis of Clinical Experiments** (P. Armitage) 1028

FOWLER, J. and COHEN, L. **Statistics for Ornithologists** (P. M. North) 733

GOODMAN, L. A. **The Analysis of Cross-Classified Data Having Ordered Categories** (Editors) 257

GOVINDARAJULU, Z. **The Sequential Statistical Analysis of Hypothesis Testing, Point and Interval Estimation, and Decision Theory** (Editors) 734

HALLAM, T. G. and LEVIN, S. A. (eds). **Mathematical Ecology: An Introduction. Lecture Notes in Biomathematics, Vol. 17.** (E. Renshaw) 480

HAUX, R. (ed.). **Expert Systems in Statistics** (Editors) 1031

HAZELL, P. B. R. and NORTON, R. D. **Mathematical Programming for Economic Analysis in Agriculture** (Editors) 1032

HILLION, A. **Les Théories Mathématiques des Populations** (Editors) 735

HOAGLIN, D. C., MOSTELLER, F., and TUKEY, J. W. (eds). **Exploring Data Tables, Trends, and Shapes** (A. W. Kemp) 252

HORTON, R. L. **The General Linear Model: Data Analysis in the Social and Behavioral Sciences** (Editors) 258

IMPAGLIAZZO, J. **Deterministic Aspects of Mathematical Demography** (G. R. Cohen) 732

INGRAM, D. and BLOCH, R. (eds). **Mathematical Methods in Medicine, Part 1: Statistical and Analytical Techniques; Part 2: Applications in Clinical Specialities** (M. J. Campbell) 730

INSTITUTE OF MATHEMATICAL STATISTICS (ed.). **Selected Tables in Mathematical Statistics, Vols. 7, 10** (Editors) 1032

JACQUEZ, J. A. **Compartmental Analysis in Biology and Medicine, 2nd edition** (M. J. Faddy) 1028

JANOVY, J., JR. **On Becoming a Biologist** (Editors) 486

KALLIO, M., ANDERSSON, A. E., SEPPAL, R., and MORGAN, A. (eds). **Systems Analysis in Forestry and Forest Industries. Studies in the Management Sciences, Vol. 21** (H. L. Wright) 253

KLOTZ, J. H. and MEYER, R. D. **Biostatistical Microcomputing in Pascal** (K. Gregson) 256

KRISHNAIAH, P. R. and SEN, P. K. (eds). **Handbook of Statistics, Vol. 4. Nonparametric Methods** (Editors) 735

MACNEILL, I. B. and UMPHREY, G. J. (eds). **Advances in the Statistical Sciences, Vol. 1. Applied Probability, Stochastic Processes, and Sampling Theory** (Editors) 1031

MACNEILL, I. B. and UMPHREY, G. J. (eds). **Advances in the Statistical Sciences, Vol. 5. Biostatistics** (Editors) 1031

MANLY, B. F. J. **Multivariate Statistical Methods: A Primer** (P. A. Lachenbruch) 1026

MANTON, K. G. and STALLARD, E. **Recent Trends in Mortality Analysis** (I. D. Diamond) 483

MATTHEWS, D. E. and FAREWELL, V. **Using and Understanding Medical Statistics** (J. F. Osborn) 256

MCCULLOCH, C. E., SCHWAGER, S. J., CASELLA, G., and SEARLE, S. R. (eds). **Statistical Design: Theory and Practice** (G. H. Freeman) 1026

MICHENER, W. K. (ed.). **Research Data Management in the Ecological Sciences** (J. N. Perry) 252

MIETTINEN, O. S. **Theoretical Epidemiology: Principles of Occurrence Research in Medicine** (J. Stene) 482

MILLER, R. G. **Beyond ANOVA, Basics of Applied Statistics** (J. A. John) 1025

MORGAN, B. J. T. and NORTH, P. M. (eds). **Statistics in Ornithology** (J. A. Nelder) 253
NALIMOV, V. V. **Space, Time and Life: The Probabilistic Pathways of Evolution** (C. A. B. Smith) 255
NATIONAL RESEARCH COUNCIL. **Nutrient Adequacy: Assessment Using Food Consumption Surveys** (G. L. Smith) 483
NETER, J., WASSERMAN, W., and KUTNER, M. H. **Applied Linear Statistical Models, 2nd edition** (J. B. Copas) 729
OTT, J. **Analysis of Human Genetic Linkage** (A. W. F. Edwards) 254
PESCHEL, M. and MENDE, W. **The Predator–Prey Model: Do We Live in a Volterra World?** (P. Holgate) 731
PLA, L. E. **Análisis Multivariado: Método de Componentes Principales** (Editors) 1031
PORTER, T. M. **The Rise of Statistical Thinking 1820–1900** (A. W. Kemp) 1027
RADE, L. **Alpha Mathematics Handbook** (Editors) 1032
RAMAKUMAR, R. **Technical Demography** (G. R. Cohen) 732
ROSKAM, E. E. (ed.). **Measurement and Personality Assessment** (Editors) 258
ROTH, R. S. (ed.). **The Bellman Continuum** (Editors) 1031
SACHS, L. A. **A Guide to Statistical Methods and to the Pertinent Literature: Literatur zur Angewandten Statistik** (Editors) 734
SAMPSON, J. R. **Biological Information Processing** (Editors) 485
SEBER, G. A. F. **Multivariate Observations** (J. C. Gower) 478
SEN, P. K. (ed.). **Biostatistics: Statistics in Biomedical, Public Health and Environmental Sciences, the Bernard G. Greenberg Volume** (P. Armitage) 251
SIOTANI, M., HAYAKAWA, T., and FUJIKOSHI, Y. **Modern Multivariate Statistical Analysis: A Graduate Course and Handbook** (A. W. Kemp) 479
SRIVASTAVA, R. N., VERMA, B. L., and SHUKLA, G. D. (eds). **Principles and Practice of Statistics in Medicine** (Editors) 735
STIGLER, S. M. **The History of Statistics: The Measurement of Uncertainty Before 1900** (A. W. Kemp) 1027
UNKELBACH, H. D. and WOLF, T. **Qualitative Dosis-Wirkungs-Analysen** (H. Flühler) 1030
VAN DILLA, M. A., DEAN, P. N., LAERUM, O. E., and MELAMED, M. R. (eds). **Flow Cytometry: Instrumentation and Data Analysis** (Editors) 258
VOLLMAR, J. and UNKELBACH, M. D. (eds). **Biometrie in der Chemisch-Pharmazeutischen Industrie 2: Biometrische Analyse von Kombinationswirkungen** (H. Flühler) 1029
WALTERS, C. **Adaptive Management of Renewable Resources** (A. A. Rutherford) 1030
WARDLAW, A. C. **Practical Statistics for Experimental Biologists** (G. M. Clark) 734
WEISBERG, S. **Applied Linear Regression, 2nd edition** (Editors) 258
WELDON, K. L. **Statistics: A Conceptual Approach** (Editors) 486
WORLD HEALTH ORGANIZATION. **World Health Statistics Annual 1986** (Editors) 1032
WORLD HEALTH ORGANIZATION. **World Health Statistics Quarterly 1986, Vol. 39 (3), (4), 1987, Vol. 40 (1), (2)** (Editors) 1033
WRICKE, G. and WEBER, W. E. **Quantitative Genetics and Selection in Plant Breeding** (R. A. Sutherland) 481
YOUNG, L. B. **The Unfinished Universe** (Editors) 486
ZIMMERMAN, D. W. and WILLIAMS, R. H. **Modern Elementary Statistics, with Theoretical Supplement and BASIC Programming** (A. W. Kemp) 485
ZINDER, O. (ed.). **Optimal Use of the Clinical Laboratory** (Editors) 735